

EAF AIRFIELD LIGHTING



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This Presentation is:
UNCLASSIFIED



PURPOSE

- To familiarize the WTI Student with the Expeditionary Airfield (EAF) lighting capability resident within the MWSS.
- To introduce the WTI Student with the future developments in EAF Lighting



Background

1960's- 1970's

- Hard wire lighting
- Airfields were lit to FAA standards
- Huge power requirements
- Enormous footprint, would require two C-141's to deploy
- Neither expeditionary nor IR compatible.



Needs of the Fleet

- Man-portable lighting
- Field maintainable
- Commercially available
- Night Vision Device (NVD) compatible
- Rapid installation (less than 3 hours)

Field Marker Lights (FML's)



- Palm sized
- Battery operated
 - BA-5598 (lithium)
 - BA-4386 (magnesium)
- Remote controllable
- Multi surface mountable
- User interchangeable lens



Technical Characteristics

- 15 cd output incandescent source
 - 60 degree arc around center of lens
 - Negligible loss through colored lens
- Expected battery life
 - 4 to 6 hours with BA-4386
 - Up to 12 hours with BA-5598



Accessories

Remote Control (FML/RC)



- PRC-119, and PRC 139 compatible
- USMC Aircraft radio compatible
 - 46.75 MHz FM



Code Controller

- 7 channels
- 6 user programmable



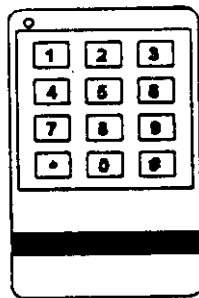
Canvas Mounting Strap

- Easily reproduced by any Flight Equipment Shop.
- Requires cable ties in order to properly complete anchoring.

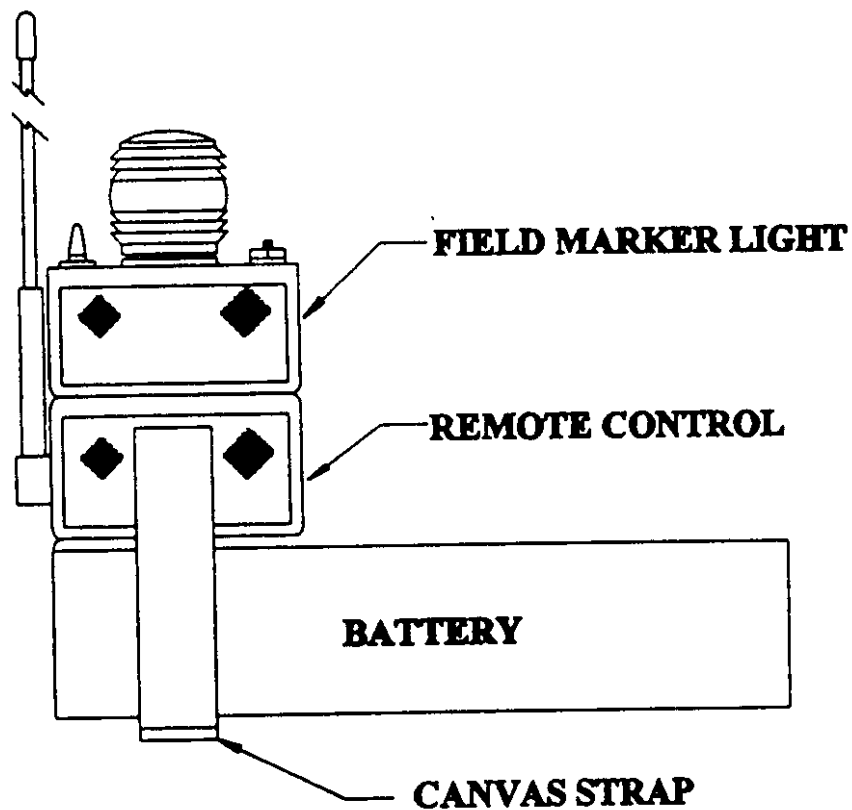


Interchangeable Lens

- Clear, Green, Blue, Red, and Infra-Red
- IR lens is AN/PVS-7B, ANVIS-6 and AN/AVS-9 NVD compatible



CODE CONTROLLER





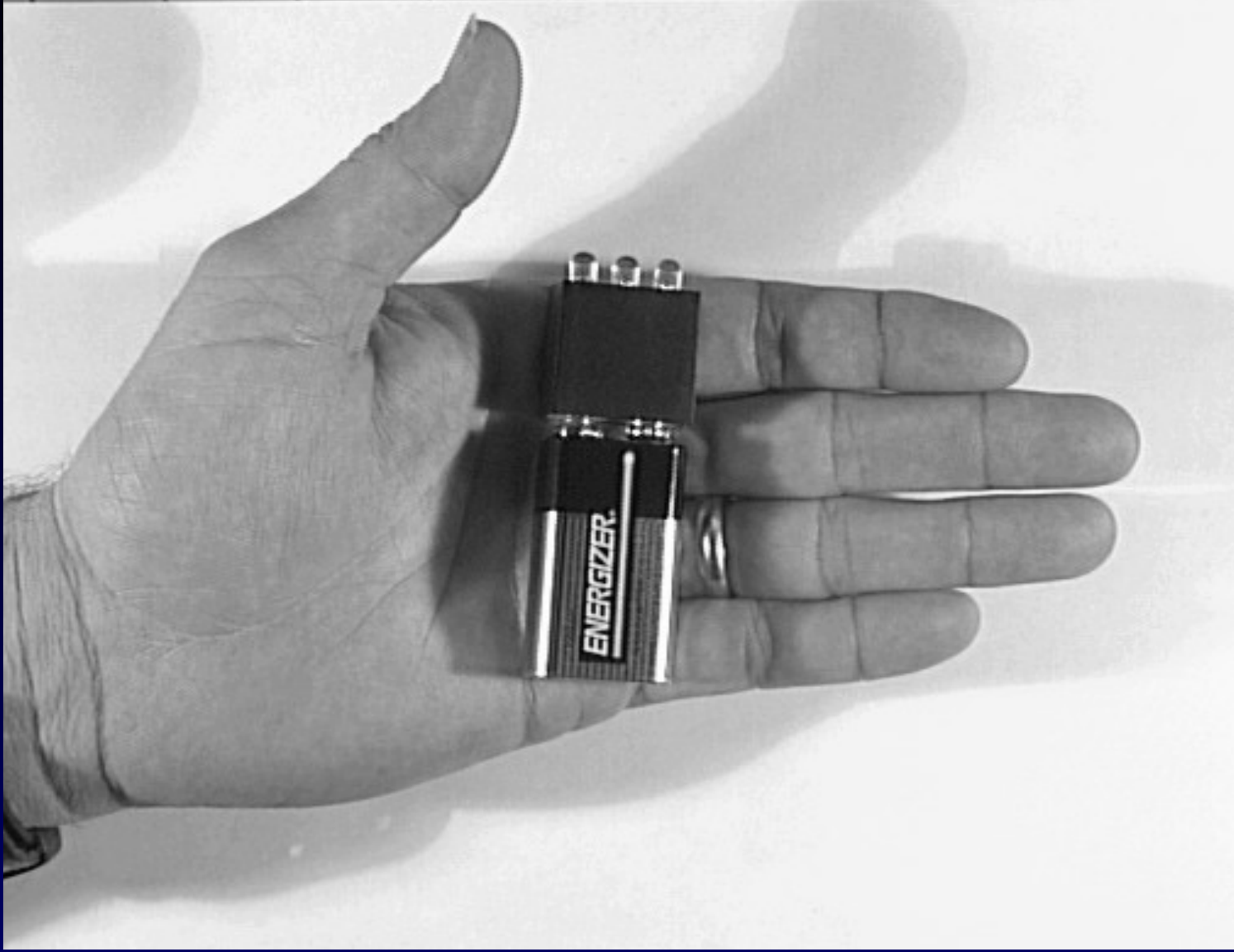
Related Missions

- Tactical Landing Zones (TLZ)
- FARPs
- Road Operations
- All FOBs



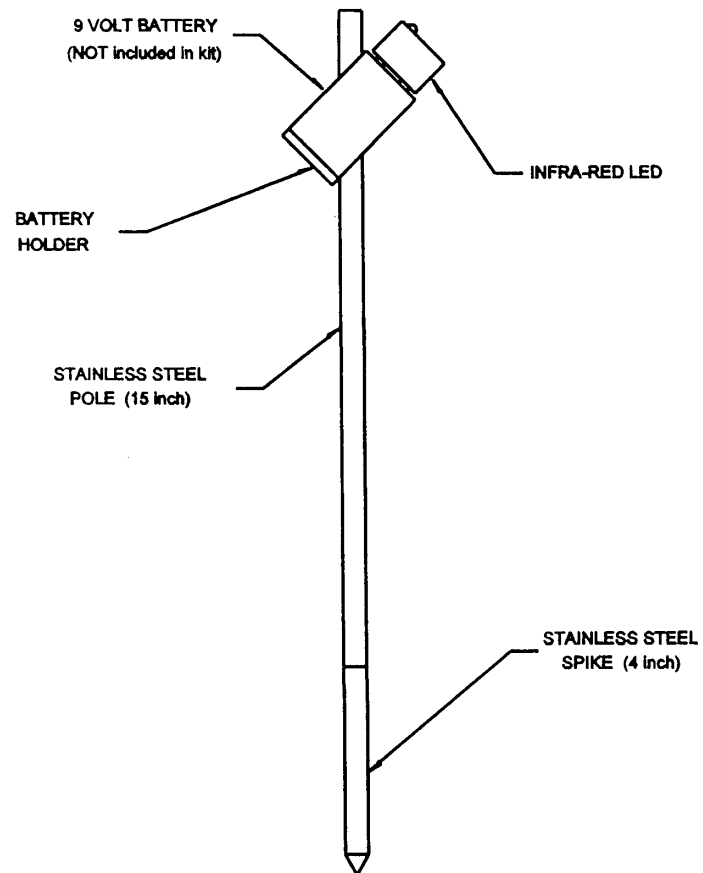
Infra-Red LED Lights (Peanuts and Fireflies)

- 9 volt battery operation
- Extremely small size
- Peanut light kit
 - 6 lights
 - 5 mounting stakes





INFRA-RED LED SYSTEM SKETCH





IR LED Enhancements

- “L” package for IR “Peanut” light assembly (L203)
- Contains 12 IR lights, 4 IR flashers, and 10 stakes
- Composition is based on a variety of tactical landing zone configurations and missions





Minimum Operating Strip Lighting System (MOSLS)

- NATO STANAG 3534
- Stand alone system
- Rapid deployment and recovery
- Provides back up for existing systems
- NVD compatible



Runway Edge Lights

- OREL (omni-dir rwy edge light)
- Visual
- NVD compatible
- 3 intensity settings

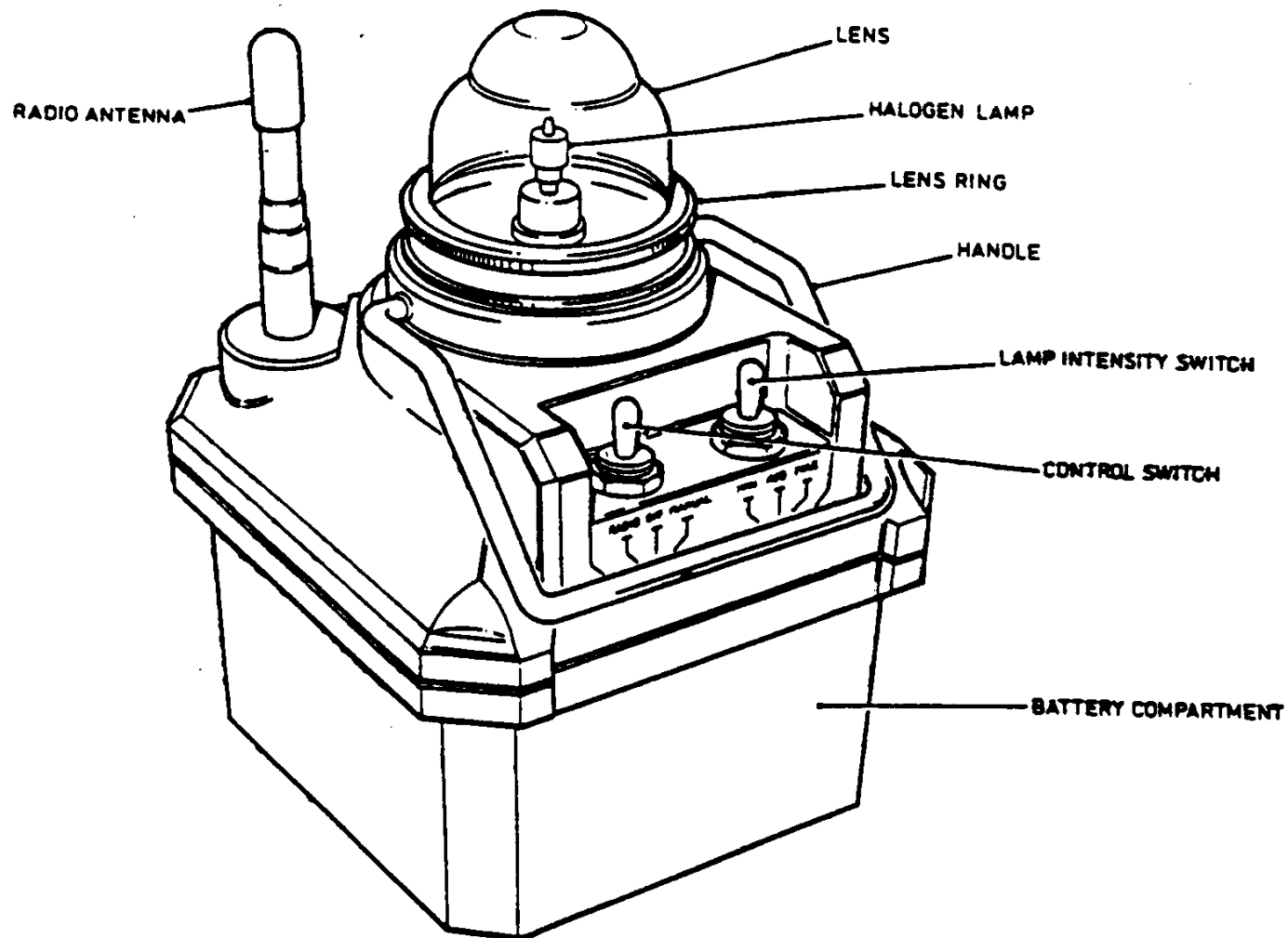
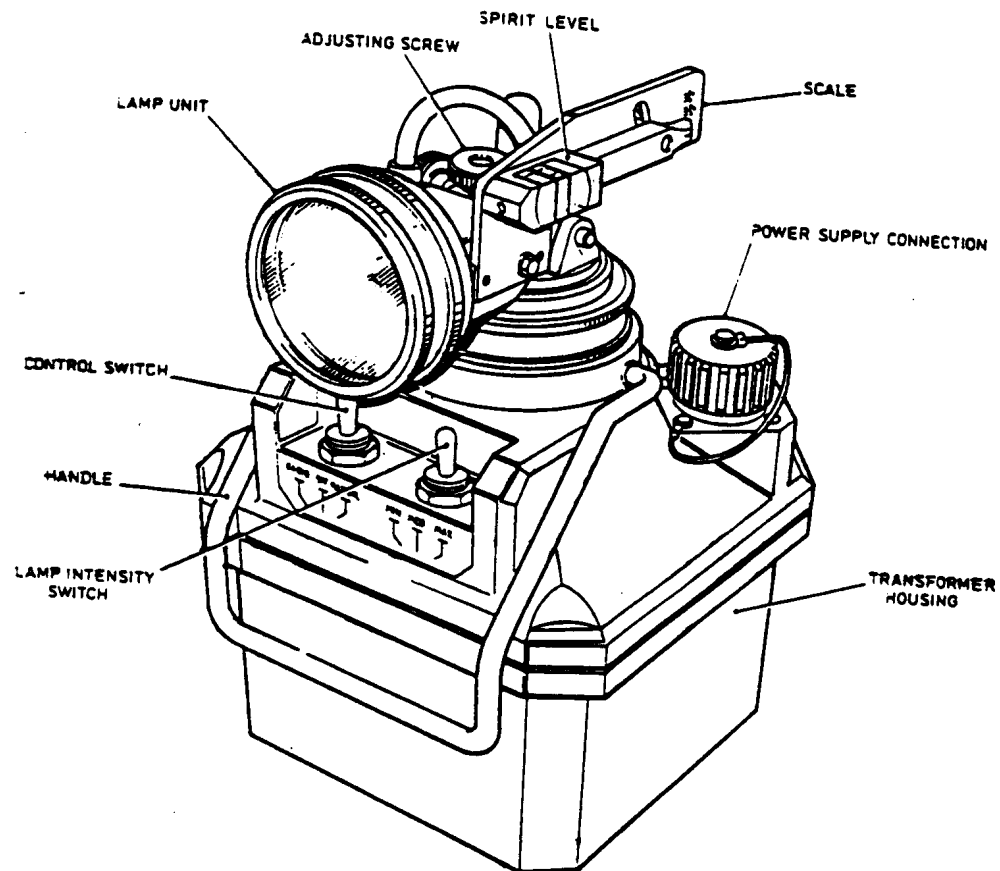


Fig 2 Omni-directional Runway Edge Light (OREL)



High Intensity Approach Lights

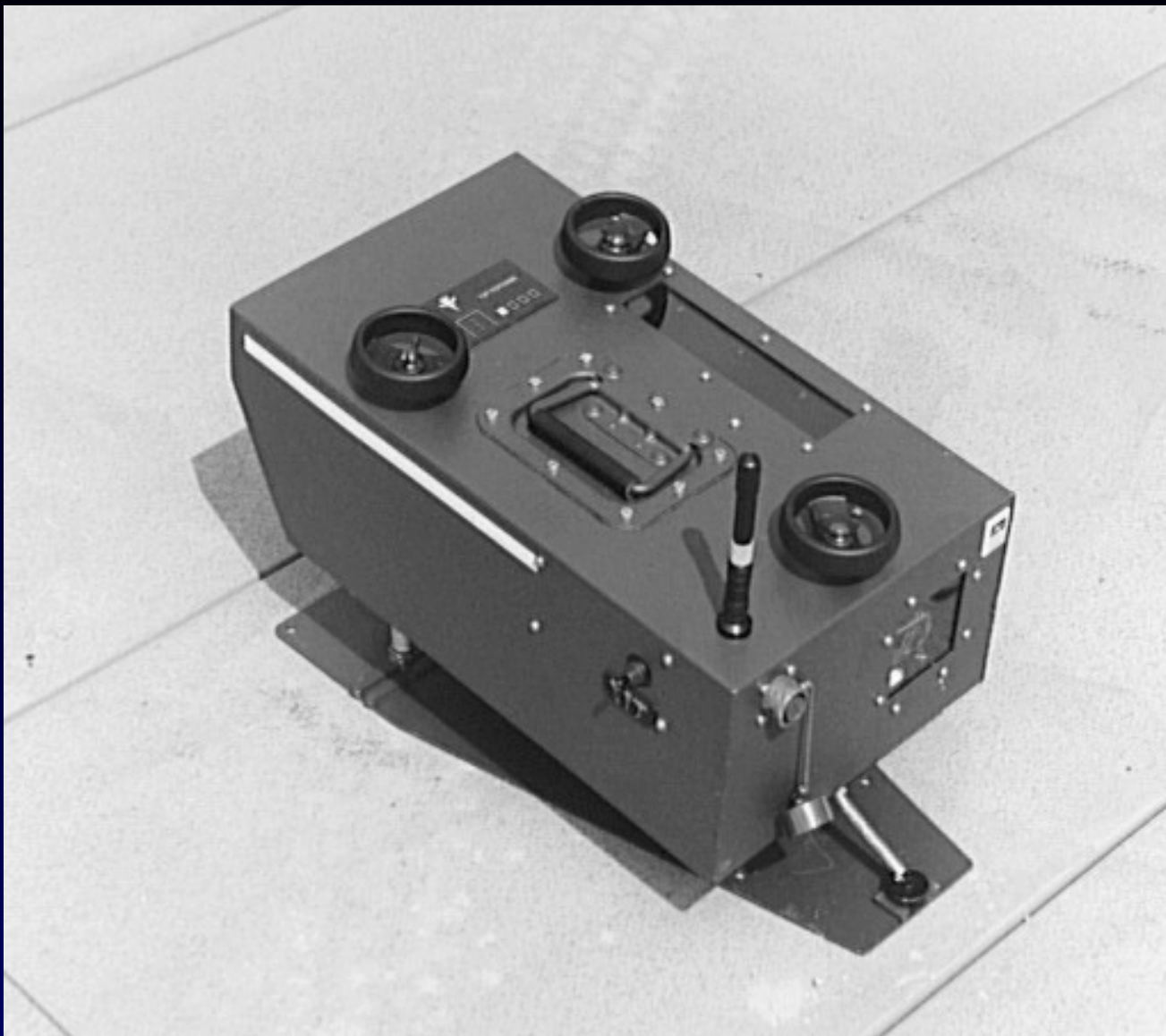
- UAL (uni-dir approach light)
- 4 per MOSLS plus 2 spares
(2 setup in each direction)








Precision Approach Path Indicators (PAPI's)

- 2 box visual
- 4 box NVD compatible



MOSLS IR PAPI



    **ABOVE GLIDE PATH**

    **SLIGHTLY ABOVE GLIDE PATH**

    **ON GLIDE PATH**

    **SLIGHTLY BELOW GLIDE PATH**

    **BELOW GLIDE PATH**

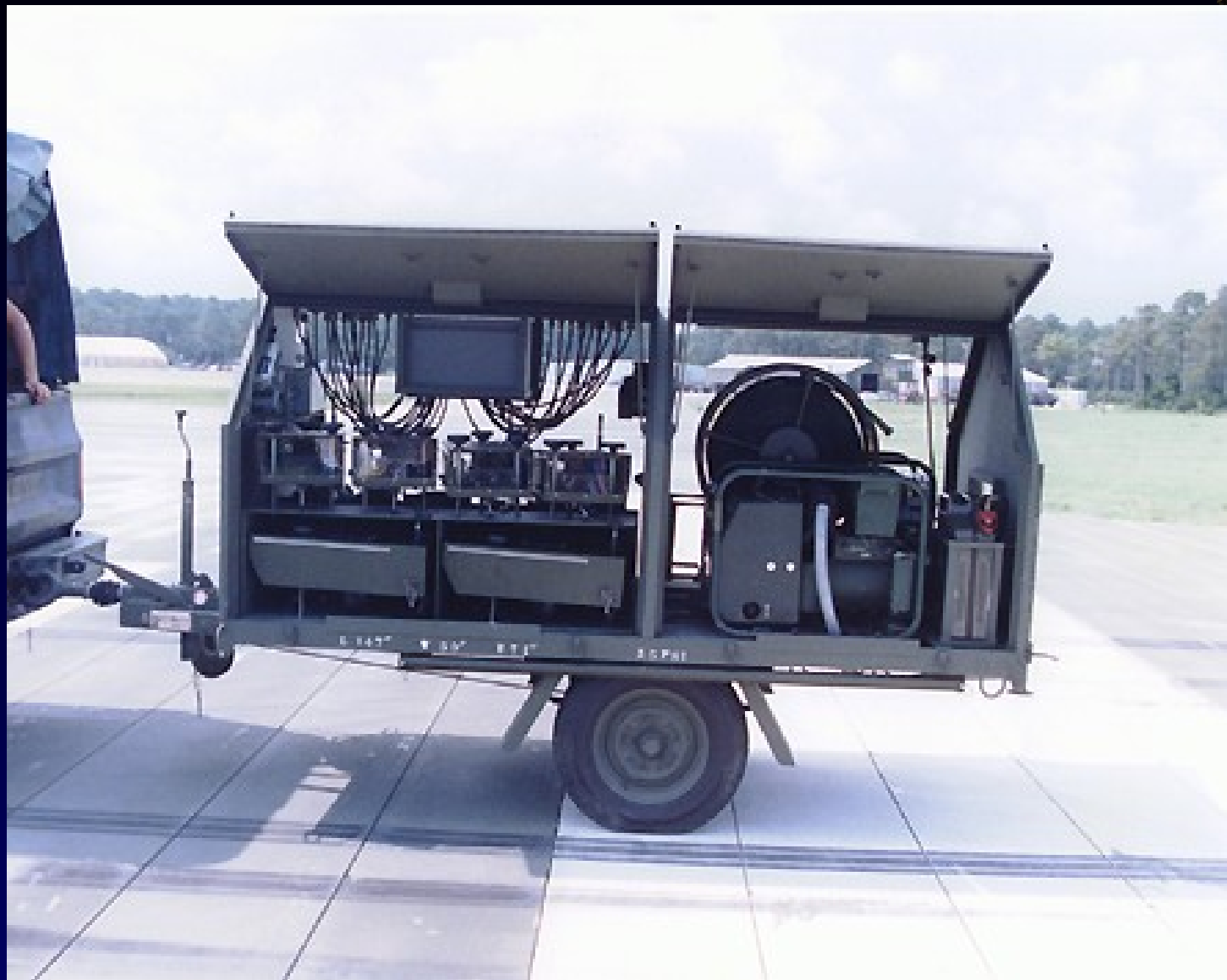
 **Steady IR light**

 **Flashing IR light**

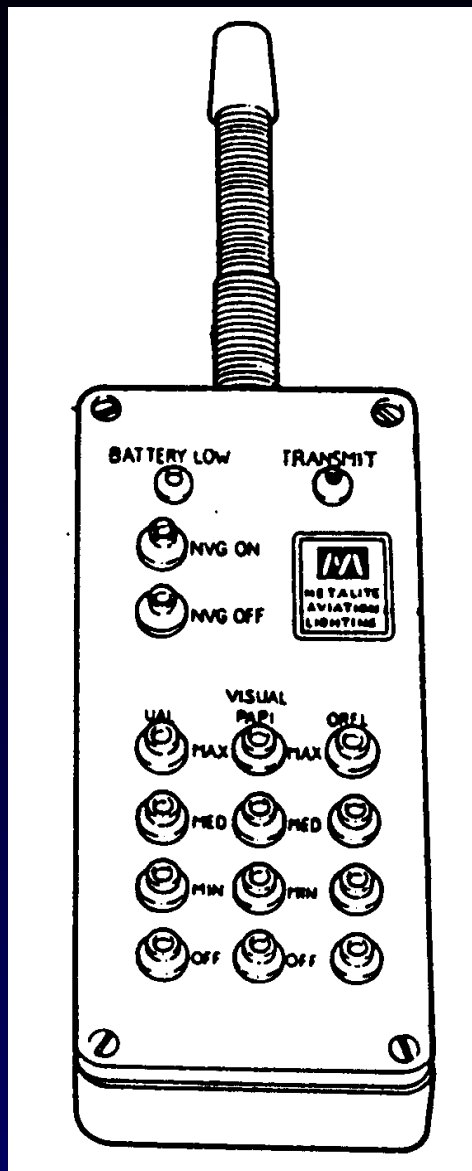
Ground Transportable Trailer



- Pedometer
- Multi-fuel generator
- Cables on Motorized Reels
- Installation hardware & tools
- Built-in battery charger & reconditioner









Current Status

- Currently MOSLs are being utilized by the MEUs in spt of Op Enduring Freedom
- CABKIT
 - Hard wire capability



VIPIR Light

- Battery Operated Light capable of both overt and covert operation
- NVD compatible in both modes of operation
- Utilizes a 3.0 volt lithium battery
- Can operate for four days in the steady on position and 240 hours in the flash mode







Summary

- 3 systems to meet the FMFs needs
- 2 man-portable NVD compatible lighting systems
- 2 remote controllable systems
- Enhanced rapid installation and recovery



Questions??